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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/498,749 02/07/00 MASUDA

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EXAMINER

IM62/0523

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ART UNIT

PAPER NUMBER

1734

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05/23/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/498,749

Applicant(s)

Masoud et al

Examiner

Lamb

Group Art Unit

1734

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-39 is/are pending in the application.
- Of the above claim(s) 24-25 and 31-39 is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-23 and 26-30 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

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### DETAILED ACTION

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-23 and 26-30, drawn to apparatus, classified in class 118, subclass 699.
- II. Claims 24-25, drawn to apparatus, classified in class 118, subclass 699.
- III. Claims 31-33, drawn to apparatus, classified in class 118, subclass 612.
- IV. Claim 34, drawn to method, classified in class 427, subclass 256.
- IV. Claim 35, drawn to method, classified in class 427, subclass 256.
- IV. Claim 36, drawn to method, classified in class 427, subclass 256.
- IV. Claim 37, drawn to method, classified in class 427, subclass 256.
- IV. Claim 38, drawn to method, classified in class 427, subclass 256.
- IV. Claim 39, drawn to method, classified in class 427, subclass 256.

The inventions are distinct, each from the other because:

Inventions I through III and IV through IX are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as applying adhesive, photographic materials or non-paint materials..

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Inventions I, II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions, with Invention I requiring stopping of the discharge of the paint to the return side after starting the feeding of the paint to the nozzle, while Inventions II and III does not require such. Invention II does require paint returning means which repeats suction and return of paint out of and into the nozzle by making a bellowphragm disposed in the nozzle move up and down, which is not required by invention I or III. Invention III does require a mixer in a flow path between the nozzle and the intermittent means, which is not required by inventions I or II.

Inventions IV, V, VI, VII, VIII and IX are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions, with Invention IV requiring stopping of the discharge of the paint to the return side after starting the feeding of the paint to the nozzle, while Invention V-IX do not require such. Invention V does require intermittent means to start the discharge of paint to the return side after stopping feeding of the paint to the nozzle, while IV and VI-IX do not require such. Invention VI does require operation times for sucking paint out of the nozzle and returning to the nozzle, and IV, V and VII-IX do not require such. Invention VII does require a bellowphragm in the nozzle, and IV-VI and VIII-IX do not require such.

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Invention VIII does require a feeding side two way valve, while IV-VI and IX do not require such. Invention IX does require a mixer in a flow path between the nozzle and the intermittent means, which is not required by inventions IV-VIII.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation between Examiner Bareford and Attorney Makuch on 8/1/2000 (Attorney Makuch made a voice mail response) a provisional election was made with traverse to prosecute the invention of Group I, claims 1-23 and 26-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 24-25 and 31-39 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 7 and 26-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Claassen.

Claassen teaches the design of a coating apparatus comprised of an application nozzle 1 for applying coating to a base material and intermittent means which intermittently feeds and stops coating to the nozzle as well as discharge and stopping of coating to a return side wherein the intermittent means is controlled by a microprocessor or control means which opens and closes the

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feed and return valves 9,25 at the desired intervals with respect to each other. Claassen teaches the microprocessor is programmed to operate the intermittent means in the manner set forth in claims 1 and 7. Claassen teaches every structural limitation set forth in claims 1 and 7 but fails to teach the coating is a paint. However, it would have been obvious if inherent that Claassen apparatus is structured and arranged to apply a variety of materials including paint absent a clear showing of unexpected results and especially since Claassen teaches his apparatus can apply viscous materials and paint is a viscous material. With respect to claim 4, Claassen teaches the intermittent means includes valve 25 having structure within the scope of the claim (See column 4 lines 61-67). With respect to claims 26-27, the same rejection applied to claims 1, 4 and 7 are applied here, Claassen teaches that the feeding and return valve having structure within the scope of the claims and a control means, a microprocessor for controlling the feed and return valve.

Claims 2,3,5,6,8-23 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Claassen.

Claassen is applied for the reasons noted above. Claassen fails to teach timing of the valves 9,25 such feeding of coating to the nozzle and discharge coating to the return side occurs within the time period set forth 2-3, 8 and 28-29. However, given, Claassen teaching that his microprocessor opens and closes valves 9,25 in any desired time intervals, it is deemed that Claassen microprocessor is structural and arranged to operate valves 9,25 in the manner such that feeding of coating to the nozzle and discharge of coating to the return side occurs within the time interval set forth in the instant claims. With respect to claims 5-6, the same rejection applied to

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claim 4 is applied here. With respect to claims 9-10, Claassen teaches the coating apparatus includes a pump, pressure relief valve and reservoir acts as a paint returning means which obviously sucks coating from supply line 20 and returns paint to the nozzle when the valve starts feeding of coating back to the coating applicator. With respect to claim 11, the same rejection applied to claims 9-10 is applied here. The recitation that the operation time as A is greater than B is a method step and does not further limit structure of the claimed apparatus. Furthermore, it is deemed that the Claassen apparatus is structured and arranged to be operated in such a manner dependent on the desired amount of coating applied to the substrate. With respect to claims 12-23 and 39, Claassen fails to teach the amount of paint sucked out of the nozzle and flow rate of paint returned to the nozzle. However, it would have been obvious to modify Claassen by using as the pump an adjustable flow rate pump since the use of an adjustable flow rate pump is known in a fluid handling system such as a coating process for the obvious advantage of greater control of the coating process. If applicant disagrees that adjustable flow rate pump in a fluid handling system is not known then he should do so on the record. Further, it would have been obvious to optimize an amount of coating sucked into the Claassen supply reservoir dependent on process parameters of the coating apparatus. Finally it would have been obvious given the modifications of the Claassen apparatus as discussed above to controllably drive the Claassen pump using a conventional driving means, a piezoelectric element, for the obvious advantage of greater control of the coating process.



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Any inquiry concerning this communication should be directed to Brenda A. Lamb at  
telephone number (703) 308-2056.

  
**BRENDA A. LAMB**  
**PRIMARY EXAMINER**

Lamb/af

May 8, 2001